

THE

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HORSES' PRESERVATIVE ;

OR,

A TREATISE

ON THE

MANAGEMENT OF HORSES,

LAI D OPEN IN A

PLAIN AND PRACTICAL MANNER,

WITH THE PROPER METHOD OF

FEEDING AND DRIVING THEM ;

ALSO ON THE

BREEDING AND SHOEING

ALL KINDS OF HORSES,

WITH THE

EXCEPTION OF THE RACE-HORSE.

BY FRANCIS BEARDMORE,

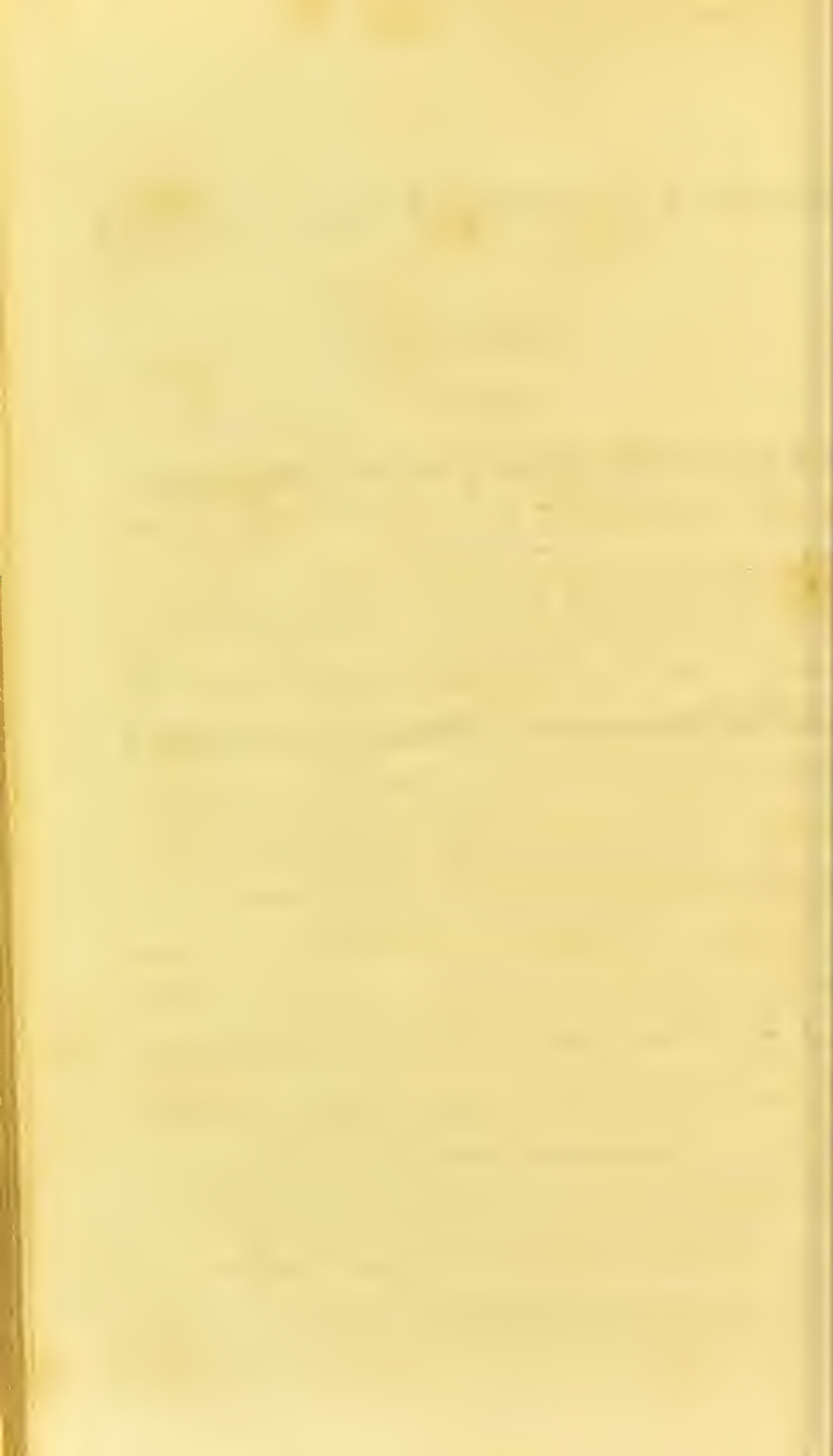
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PREFACE.

IT is with the utmost diffidence that I appear before the world in the character of an author. Having had, from my earliest years, an uncommon predilection for horses, and, since my twelfth year, having been entrusted with the care and management of them, I have thought that a relation of my experience and knowledge, as to their treatment, would be beneficial to that portion of mankind whose interest it is to preserve in health and strength those useful animals. The language I have adopted throughout the *Horses' Preservative* is of the plainest and most familiar kind, such as I have no doubt will be thoroughly understood by every one of my friends who may purchase this work. I have also endeavoured to compose it in as brief a manner as possible, hoping thereby to render it more useful; for most publications of this

nature, owing to their immoderate length and high-flown language, are rendered tedious, and are often not properly understood by those who ought, and who are anxious to get a knowledge of the subject. By perusing the following pages, I flatter myself the reader will become perfectly acquainted with a useful treatise on the management of draught horses, and on breeding and shoeing all kinds of horses, with the exception of race-horses. I have treated on the manner in which common draught horses ought to be geared, so as to afford them both comfort and power; and also of coach-horses that they may travel with ease, speed, and power. I have also pointed out in a very conspicuous manner, the proper plan by which young horses ought to be shod, in order to give their feet into a proper form; for when they are young, then is the best time to make an alteration in their feet, as it will require a considerable length of time before they are properly formed: therefore, if their feet be crooked they ought to be properly shod when they ha

attained the age of two years, in the manner directed in the fifteenth section, "On shoeing of horses;" and if that advice be followed, there will not be that inconvenience which is often visible when full grown, and at full work. I have also endeavoured to relieve the saddle and harness horses from great inconvenience and danger, though the chief design of the theme is to make them travel safe and well. Ignoramuses contrive the horse something to stand on, as they say; and therefore form his foot as long and as large as they can: nor does this altogether satisfy them; for they mostly have the shoe projecting over the foot, that (as they vulgarly say) he may have something to stand on. This is a very great inconvenience to the horse, for it is not the foot on the ground that he mostly stumbles with, but the foot that is on the move.

If any errors or inaccuracies should appear in this volume, the author trusts to the indulgence of the candid reader, as the bent of his

inclination has ever been more prone to learn the logic of the stable, rather than that of the school-room.

Hoping that this work may tend to reform many of the evils and misconceptions relative to the treatment of the valuable animals of which it speaks, and that it may be realized as a valuable companion to the agriculturist, &c. I subscribe myself,

FRANCIS BEARDMORE.

*Spot Grange, near Stone, Staffordshire, }
June 1, 1832. }*

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THE
HORSES' PRESERVATIVE.

IN the course of nearly thirty years' practice, during which time I have had the management of a number of horses, both of my own and other persons, my great success has encouraged me to publish this work, trusting that by this means I shall be useful to my fellow-countrymen in the same profession. During the whole of the time I never had a blind, nor a broken-winded horse, nor lost one in the whole course of my life; neither have I ever had occasion to employ a Farrier.

I am now capable of proving that I can make any horse that is able, to work well; or any colt, that has not been geared, a free or a slow worker. Therefore if proper attention is paid to this short treatise, I am confident that any per-

son entirely ignorant of horses will be able to make every horse work pleasantly, and preserve them in good health, and avoid that cruelty which is so commonly inflicted on that noble animal.

SECTION I.

EVIL PRACTICES.

IN the first place I shall point out the almost universally evil practice that prevails in the management of horses, as it regards their health, and in order that it may be guarded against in a particular manner, I purpose to treat on the Bo and Coach-horse, as well as on Agricultural horses, as some connected with these professions wish to become purchasers of this work.

To proceed,—The evil practice that prevails —When a horse has had a hard day's work, is the more chilly and tender, and probably has not had his water regularly and properly in the course of the day; and even then, it is a very common thing among wagoners, at racking-

time, to turn them out to the water, and in a few minutes leave them for the night: with this treatment, no reasonable person can expect to find them alive and well the next morning: probably the wagoner has no sooner left the stable, than some of them are taken with a tremour or trembling; the blood stagnates about the heart; and if able to retain life he is taken with some incurable disease, and will never be thoroughly useful any more.

I shall therefore endeavour in a forcible, yet plain manner, to guard my readers against that fatal treatment. When a horse comes in from the water, most probably his coat turns the contrary way on his baek; but he should not be suffered to remain in that state: all hands should be at work in rubbing him from head to foot, and the extremities, such as the legs, head, and ears, with the bare hands, as they nourish and warm those parts better than any thing besides. The horse should be seen half an hour after this treatment; if his skin feels warm, his coat lies close, and he eats his meat, you may leave him for the night, and expect to find him well the next morning.

It may be proper before I leave this important point and take the work in rotation, to pursue this subject a little further:—When the horse comes from the water, he should have a little corn in the manger: this not only warms his stomach, but puts the jaws in motion, and helps to circulate the blood in those parts.

The coach, boat, and every other horse, though clothed, are liable to be affected in a similar manner to the agricultural horses: for custom is second nature. As soon as he has had his water, he should have some corn; his legs, and all the parts where the clothing does not extend, well rubbed with the hands, in order to warm and circulate the blood in those parts. If the horse is seen half an hour after having his water, and this treatment, and his skin feels warm, his coat lies close, and he eats his meat, you may leave him for the night, and expect to find him well the next morning.

The next evil practice that I shall point out: when they come to a baiting-house, as it is called: the first thing they give them is water, then some hay, sometimes in the street or lane, probably in a keen draught of wind, there remain for half an hour or an hour.

This is a practice that is very destructive to the horse's health and constitution; but the fatal consequences of this are, in a great measure, warded off by the work he has to do afterwards. If he is able to start, and continue for about half an hour, he may be expected to break out into a profuse perspiration; this relieves him for the present time, but renders him less able to bear the dreadful stroke at night.

With such like treatment it is no wonder so many horses are found dead the next morning, or taken with some incurable disease. These are evil practices that want reforming, and cannot be pressed with too much energy on the mind of every one that has the management of horses.

Before I leave this subject I shall endeavour to point out another evil practice that prevails in the management of agricultural horses.

When they intend going a journey on the road, they provide an extra stuffing for the horses. I had at one time a fine mare brought almost to death's door, with that very thing. It so happened that my corn crop failed, and having abundance of potatoes, I gave them potatoes instead of corn: my order was, to give them the potatoes, new-milk warm, the last thing at night,

and not immediately after their water; but instead of doing according to my order, my servant had hoarded them up in the coffer for the next day's journey, and gave them to the horses in sour state the next morning; so that, in consequence of their being stuffed with the sour potatoes, they could scarcely walk or breathe: we had not gone far on our journey, before one was taken ill of the belly-ache, and brought, as I said before, nearly to death's door, as might be expected; but with proper treatment she recovered.

Before I proceed to the next section, it may not be improper to name a conversation that occurred between myself and a wagoner about feeding horses: his was a miller's team. He said, if he did not water his horses the first thing in a morning, they would have the belly-ache; it is dangerous to give a horse a great quantity of bran or clammy stuff, and then a great quantity of water, as it is sure to lie heavy on bran or mill stuff. I answered, this is no reason why horses should have their water on an empty stomach; if they are allowed no corn, they should have some good hay; the oily qualities of a little good hay or corn fortifies the passages of the stomach against the chilly effects of the water.

and it is rendered much richer and less dangerous.

SECTION II.

ON FEEDING.

I SHALL now endeavour to point out a treatment that will preserve them in good health: the same treatment I have observed for nearly thirty years, and the great success I have had in the course of that time, justifies me in thinking it a good foundation to build upon.

To begin the day's work, they should have some good hay the first thing in the morning; and as they are more subject to refuse their meat in a morning, than at any other time in the day, it is proper to rack them up at night with the worst, and provide the best for the morning: though they would eat the bad hay in the morning, it would be improper to give it them, as it is more hurtful on an empty stomach than at any other time: moreover, when they have eaten a moderate rack of hay, or at least ate hay for half

an hour, and then a considerable portion of their corn, (I mean, if they have a full allowance of corn,) they may have their water, and the remainder immediately after; but the corn should always be given in small quantities at a time in the manger.

It is proper to mix a little cut straw or hay with the corn, as it makes them chew it much better. It is the plan of some to cut the whole of their hay; but, in my opinion, this is completely throwing away the advantages which the infinite wisdom of Providence has manifested in the formation of the hay; for it is formed with joints, which no doubt were so ordered for the very purpose of preserving its virtues; also it is formed so as to admit of no air through it: but that is not the case when cut, for then there is a free course for the wind through it, which must of course, very much diminish its virtues; for in a short time it will become as a dried stick.

It is also the opinion of others that there is less waste of it when cut; but if the rack is made properly, and the hay given to them in small quantities at each time, no doubt remains, but that there is less waste of its real qualities, when given to them in its natural state, (and they will

chew it better in that state,) than when cut. I know of nothing better than a little sweet wheat straw, well cut, mixed with their corn; for it causes them to chew it better than any thing else beside; and I believe it is very healthy, for it keeps the corn light on the stomach.

I shall now proceed with the other part of their living—that of water, as the health of the animal depends, in a great measure, how it is given to them.

It is very common for agricultural horses to be turned out to a pit of standing water, which, I believe, is the most healthy; but this is not always the most preferable; for in very severe weather it chills them too much to turn them out of the stable at night and morning; therefore it is better to water them in the stable with the best spring water, if it is convenient, in very severe weather, as it is less chilly. They should always be well rubbed down immediately after leaving their water, and have a little corn in their manger in order to circulate the blood. Also it is proper to keep them eating two hours at least: if they are on full feed, it is best to divide the feed into two equal parts, and give them the

water in the same way, that is, at twice,—part just before they leave the stable.

It is not always convenient to give them a feed of corn in the middle of the day, but always preferable where there is a full allowance: of course they must have some hay, and if it is not convenient to put them into a stable, they may be allowed to stand and eat hay for twenty or thirty minutes, and have some water just before they start. Some say that they will not eat without having water first; but this is a mistake; urge them to it, and they will not look for it. Great care must be taken that they are not suffered to stand in a draught of wind, as there is not much danger of their standing a little long to eat.

It is always advisable for wagoners to have cloths for their horses, that have to stay at different places; as for instance:—If a team is sent to a coal-pit, or a lime-kiln, it is uncertain how long they will have to stay; and those places being generally in very cold situations, it is then proper to put on their cloths; but they should never be allowed to work in them, if so, it causes them to be tender and chilly when they come

be taken off at night; and therefore more liable to take cold.

It is better for them to have neither hay nor water, than to have the water first and stand long afterwards. Also, if it is convenient, water them by the road side, and proceed on the journey, (I mean, besides night and morning, as they can hardly be watered too often,) for when they have been without water a long time, then is the most danger. If they have had water twice, or an hour or two before they come home, (which is always the best,) there will be less danger at night: when they have been treated this way through the day, there will be nothing out of the common way required at night.

It is a bad practice to take them into a pond of water to wash their legs, when they are warm at night. I have known horses killed with this and nothing else: I believe it is better to have them all over dirt, than to wash their legs when they come home warm at night. When they are put into the stable, of course they must be well groomed, and have some hay; and when they have done steaming, and begin to cool, it is necessary to clean them well all over, and not to rub them too much, but make use of a brush,

or wisp of straw, and by this time it will be proper to give them some corn and water; but invariably they must be rubbed down. After having their water, and seeing them half an hour afterwards, if their coat lies close and feels warm, and they eat their meat, there is no danger in leaving them for the night; but if they are chilly and tremble, all hands must be employed in rubbing them from head to foot—their head, ears, and legs with the bare hand, and their bodies with wisps of straw, as nothing warms and nourishes those parts better (I mean head, ears, and legs) than rubbing them with the bare hands: if the weather is dry and fine after this treatment, it will be proper to put a cloth on them, and walk them sharply about, or trot them if thought better: any thing to promote perspiration is proper. When they are brought in to the stable again, give them a mash of scalded bran or oats, a little more than new-milk warr; repeat the rubbing as before, and then clothe them again: if they are not restored by these means, it will be proper to bleed them; and, if thought necessary, give them a cordial drink a warm water, and mashes for two or three days.

It is proper when horses are at dry meals to give them a mash of scalded bran, or warm potatoes, once or twice in the week at least; and that should be given new-milk warm, the last thing at night. If horses are treated in this manner, they will seldom require bleeding or physic; but if horses are kept a considerable part of the year on dry meat, they should have some powders in their mash or moistened corn, which I have prescribed in another part of this work. With such like treatment you will be able to see them safe through the winter season.

SECTION III.

ON THE GRASS SEASON.

I SHALL now proceed with the other seasons, as they are properly divided into two—winter and summer, or dry feed and grass; I shall also point out a few dangerous practices in commencing the grass season.

I have known horses killed by giving them a great quantity of grass in the stable, or by turning them into a full pasture of sour grass; there-

fore it is always the safest to turn them into moderate pasture of pure grass, after the dew is off, and fetch them up before it falls at night; the next night they may lie out with safety. If it is not convenient to turn them out to grass, they should have a little of the purest grass that could be got, (I mean, such as grows in the sun, which should be got when the dew is off,) and mixed well with some hay for about two days, increasing the quantity of grass, and reducing the hay. If this method is pursued for about two days, it will be then safe to give them altogether grass; it will be safe, too, and advisable to give them some hay in very wet weather, as it checks the griping qualities of the grass.

The same precaution must be taken in the season as the former, with respect to the watering of horses. It is not always convenient to water agricultural horses in the middle of the day, although that time is the best; but they should be watered when they come home, after having something to eat; if turned out to the water they should be brought to the stable again, rubbed over as in the winter season, and in about twenty minutes or half an hour, if they are right, and their coat lies close, they may then go to the

pasture. It should be observed, if horses have been without water a longer time than usual, they should not be suffered to have their fill the first time they go to the water, but in a little time afterwards.

In the beginning of the grass season I recommended a short pasture, but this has sometimes a bad effect on the horse's head; for sometimes it will cause his head to swell behind the ears. If this is the case, he should not remain in the pasture too long at a time; but ought to be fetched from the pasture, and have something to eat in a rack of considerable height, and giving him a little at a time, it will keep his head up; by which means the swelling will probably go down without farther trouble; but if his head is inclined to swell still more, it will be proper to give him a considerable quantity of meat in the rack, as before prescribed; until his head is settled.

Sometimes it affects the eyes. When that is the case, the head ought to be kept up as before directed, and the eyes and upper part of the head well bathed with cold spring water, especially about the temples, and the sockets of the eyes. The eye-lid should be lifted up with the finger

and thumb, that the water may stream through the eye: a clean linen rag is a proper thing to bathe the eyes with, or a sponge may be used. If the eyes are much inflamed they ought to be bathed at least twice a day. If the inflammation does not abate in the course of a few days or a week, recourse must be had to bleeding: but bleeding should be avoided, if it is possible. It is always proper to bathe the head and eyes with cold spring water, when the latter are inflamed.

SECTION IV.

ON WORMS.

AS most horses are more or less troubled with worms, it may not be improper to observe, that we have always found it greatly relieves them by giving them some hemlock in the spring of the year. When they come from their work they will eat as much as will completely cleanse their body from worms. This is a very important part of the treatment of horses that are troubled with the worms, for they never work well nor look well, when troubled with that complaint. The

will grow amazingly after their being cleansed from the worms.

Hemlock very much resembles kedlock : if the value of it was fully known, it would surely be sought for as a hidden treasure.

It may be proper also to notice, that in very hot weather it is refreshing to the horses to wipe them down with damp wisps, a few times in the day. This treatment is sufficient for agricultural horses ; but coach and other horses, that are constantly on the hard road, should have the gravel and dirt properly spunged or rinsed out of the cavities of the feet and heels ; the latter should immediately be wiped dry, in order to promote the perspiration in those parts. Urine is the best thing to wash horses' heels with ; and it is highly necessary, when these sort of horses have had a hard day's work, to have the chill taken off their water at night, and have a good and dry bed.

It is very improper to suffer horses to remain in a green draught of wind, in order to get them dry. The coach and other horses may remain out of doors for eight or ten minutes, or at least till they are done panting. It is a very common practice for wagoners to put their horses in the farm-

yard, and as much in the sun and wind as possible, on purpose, (as they say) to get them dry before they go out; but it would be better to turn them out into an open field all sweating and steaming, than to keep them stationary in the sun and wind for any length of time.

Horses ought always to be put in the stable in the middle of the day, when not at work; they will rest much better, in hot or wet weather, in the stable: this should always be observed, and when they are teased with the flies, they are continually stamping and moving about, and thereby injure themselves and the pasture very much. In the wet weather they will be very glad to have a little dry straw to lie down upon, which they will mostly do in a few minutes after they enter the stable.

It is not my intention in the least to treat upon farriery; but it may not be amiss to mention a few external applications which will mostly relieve a horse when it is taken with the bellache, particularly if it so happens that drugs have to be fetched from a great distance:—

In the first place, it is proper to bleed him, and endeavour to make him break wind by tickling him about the fundament. Secondly; try

make him stale: (mares will mostly stale by putting a little ginger or salt under their tails in the usual way; but salt is the best: and horses by taking them into the stable and putting plenty of litter under them.) Thirdly; put a large quantity of straw about him, and let him roll about for a considerable time; then clothe him and keep him warm, in order to promote perspiration. When he rises from rolling about, spread a dry and warm empty sack under his belly, and a person should stand on each side of him, and have hold of the corners of the sack, and saw it well across his belly for a considerable time,—fifteen or twenty minutes; then he may roll about again, or lie down awhile; then saw the sack again across his belly: his legs, head, and ears should be well rubbed with the hands. If the weather is fine and dry, it will be necessary to walk him sharply about, or trot him easy, still keeping him clothed, in order to cause perspiration. It is necessary that these external applications should be applied immediately, as they generally have the desired effect. I have known horses relieved by forcing tobacco smoke up their fundament; this will mostly cause them to break

wind, which is the most essential thing for their relief.

If these applications do not give them ease in the course of half an hour, it will be necessary to call in an experienced farrier. But if strict attention is paid to this short treatise, there will be but little occasion for one; for, if paying a due attention to their meat and water has a tendency to keep them in strength, so also it is likely to prevent them from having the belly-ache.

When horses are a considerable time at dry feed, it is indispensably requisite that they should have some powders in their mash, or moistened corn, at night: take equal quantities of nitre, cream of tartar, flour of sulphur, and antimony. a table-spoonful may be given the last thing at night; and they may have their water in the usual way: if this treatment is strictly persevered in, they will seldom require bleeding or purging; the former should always be avoided except in cases of inflammation, for if it become customary, it will be a difficult thing to get through a year without it.

SECTION V.

ON GEARING.

It is astonishing to see this part of the treatment of horses so much in the dark in this enlightened age. When we look at the form of a horse, and the manner in which he is geared, we seldom see him, geared or in harness, but his hames are hanging down his breast, and outside of his shoulders. This is completely throwing aside the advantages which the wisdom of Providence has given us, in the formation of the animal. If a person will lay a heavy weight upon the point of his own shoulder, and then place it close to his neck; he will find it much lighter. It is the very same with horses; and nature seems to have given them a great superiority, in forming their necks so advantageously: for in the very part where it is proper to attach the burden, there is a cavity in the neck, which was, no doubt, so formed for that very purpose: therefore, if the burden is attached lower than the bottom part of the cavity, the horse cannot lift his knees and feet as he otherwise would do if the burden was attached to the proper part of

the shoulder. The horses of heavy burden ought not to be geared lower than the bottom part of the cavity; and the harness horses a little higher. It is not in the least surprising that so many horses are drawn out of form, and the knees broken, when the burden is attached to the lower part of their shoulders; this cannot fail to draw the shoulders out of form, and disfigure their necks.

The hames are a very important part of the harness or gearing; and as all horses' necks are somewhat of the same form down by the shoulders, therefore one plan will do for both horses of heavy burden, and horses of speed; with the exception that the latter should be geared a little higher, that is, the staple that the weight is attached to should be a little higher on the hame; by that means, they will be enabled to get the shoulder points forward, and lift up their knees and feet in a proper manner.

Horses being improperly harnessed and skilfully shod, together form one of the principal reasons why there are so many with broken knees; therefore as they are two very important points, I shall treat upon both of them, first upon the form of the hames.

SECTION VI.

ON THE FORM OF HAMES.

It may very easily be understood that if the hames hang down the point of, and outside the shoulders of the horse, it very much impedes his speed, and diminishes his strength: I shall, therefore, proceed to point out an advantageous and proper method of forming the hames, both for horses of speed and strength.

It is requisite that not only the collar should fit the horse's neck, but the hames also. If the collar was made a little more elastic in the middle, than it generally is, it would allow the hames to fit better into the cavity of the neck. When hames are made in a proper form, fit close, and are put on well, they will be a means of preventing the collar from injuring the shoulders of the horse. They should be made somewhat stronger about the cavity of the neck, and finer downwards: by this means they will fit much closer.

I believe no horses experience greater disadvantages in regard to hames than the coach and boat-horses, for which I shall endeavour

to point out a remedy:—If hames are made of one size, (which I believe to be the case with those of the coach-horse,) and the horse happens to be smaller than the usual size, and no means of taking up the hames, they, of course, must hang down the horse's breast; but this could be remedied by having a small noose, three or four inches from the top of the off hame, to put a necking through to clasp over the other hame: the near hame to have a noose a little lower down, to admit a strap to clasp the necking, which will hold the hames as tight as if they were fastened at the top; and by this means keep the hames up in the proper place. The noose will be of no disadvantage to the hames of the coach-horse, when not required to take them up, as they can be fastened in the usual way, providing they are not too long for the horse they are intended for.

SECTION VII.

ON THE BRIDLE, &c.

It is needful that the bridle should fit easy, the weight of it rest in the cavity between

pole-bone and the ears.—The next thing of importance is the reining of them up. This is commonly carried to extremes, either too slack or too tight :—if too tight, it stretches the tendons of the neck too much on the pole bone; if too slack, it does not support the head in that easy and sufficient manner it otherwise would do, if done in moderation; as either extremes are very improper.

With respect to the temper of horses, some will bear reining up much tighter than others; but this depends wholly on the form of the head and neck, and as such, it should always be done in that manner as appears most comfortable to the horse; it being only necessary to give a sufficient support to his head.

The next subject of consideration is, the back-crupper, which is mostly rendered very hurtful by the bad judgment and neglect of the wagoner, in allowing the horses to be uncruppered; when that is the case, they are obliged to have the hip-straps so tight, as to cause a great weight to rest upon the top of the rump. There is generally a bulk, or pad, put on that point, which helps to increase the weight on that part. Cruppers are better without pads, even if the stitches

are rough; but if saddlers would lay the stitches smoother than they generally do, it would be a great improvement. The cart-saddle crupper should have a pad and remain uncruppered, and the breech-band will prevent the saddle from getting too forward, if it is in its proper place; indeed if it is not, the horse cannot go down hill as he ought to do; if it is too high, he has not the power he would have, if it was about the centre of his body: if it is too low, the horse will be afraid to go down hill: if much too low it will completely take his legs from under him and after that he will always be afraid of going down a hill, and then he is not fit for shafting.

When the chain-horses have pads on the cruppers, and go uncruppered, and have the hip straps tight, which is necessary when uncruppered, the weight that it causes, and the friction together, will make that part bald as long they live, and make them look old, when they are young. But if the crupper is made properly without a pad, the horses cruppered, and the hip-straps a little slacker, seldom will there a hair frayed. Many evils arise in consequence of allowing horses to remain uncruppered; they get a trick of slacking from their work, a

flinging the collar forward, which not only frays their necks, and causes a chilliness about their shoulders, but puts the collar in an improper form for starting again. When horses are allowed to start with the collar off the top part of their shoulders, it not only strips off the mane, but very often the skin also: when that is the case, it may easily be conceived what misery the poor animals are in, either when at work or not.

It is of the utmost consequence that the collar should fit the horse's neck; if it is too big he never works easy; and it should not, on any occasion, hang down below his neck. There is a great inconvenience attending a lean horse that has a large head: it is with difficulty that a collar can be made to fit him, his neck being too small for the collar that his head will pass through; but this might be remedied by having the wale made more elastic, which would allow the hames to fit better into the cavity of the neck, and be of great advantage.

The belly-band should be moderately tight when horses are at work, in order to prevent the collar from choking or hanging them; this is requisite both for harness as well as draught horses.

SECTION VIII.

ON DRIVING.

DRIVING is one of the most important points belonging to the management of horses, as nothing tends more to promote their health and strength, than to avoid distressing them in their work, for it is possible to drive and whip a horse, till he will, in a manner, stand still.

I have lately offered a wager, that my team will plough an acre and a half in ten hours when at grass and no corn, or moderate keep in the spring, without whipping a horse, or scarcely a word being heard, and with less number of horses than is generally used in this part of the country.

I think it a most absurd practice to use a regular course of whipping and words; as it is an infliction of punishment when not merited, and a waste of breath, because of no use whatever. But this is not wholly the fault of the driver, for some masters are not content with hearing the incessant cracking of the whip, and the noise of angry words from morning till night, and very likely not one word in a hundred h

the effect of making the horses perform their work better. I never saw a team which was subject to regular infliction of punishment, that could or would work better for it. Very frequently it happens that the punishment they receive does them more harm than their work otherwise would do; as nothing tends more to damp their spirits and diminish their usefulness than this cruel treatment; in consideration of which, it is highly necessary for the driver to study the horses' temper and sagacity; because, in this respect, I believe they are seldom behind their driver, or master, that is set over them; for which reason they ought to be driven with knowledge and judgment.

I shall also point out an absurd custom in driving that prevails in some counties:—If they want the leader to come a little towards them, they say, "Wo-back;" and if they want him to come right back again, they say the very same word. Now, if he knew what to do, I think he must have more sense than his master; and if he does not know what is meant, which cannot reasonably be expected, he must have an unmerciful lash with the whip across the head and neck, which is contrary both to humanity

and reason, and cannot fail to make them unruly.

I shall now endeavour to point out a rule for the driving of horses, as a regular rule is much needed; particularly when they are continually changing the drivers.

The drivers should have one peculiar word when they want them to come right back again, and it should never be used at any other time, or they will not know when and how to obey it. If this regular rule was adopted, there would not be that inconvenience in driving which is so very perceptible when a fresh driver is appointed over them: then again, when they want them to turn back again, it would be proper to say, "Wo-o-come-again," or "Gee-again." There must be other words used when they are wanted to come a little nearer the driver, as "Come-hither," if a little from the driver, "Gee-off:" if these words were always properly used there would be very little trouble in getting them readily obeyed, every time they are spoken.

It is requisite to have a side, or safety rein to the first horse, extending from the bridle to the top of the hip-straps, hanging along his side. It is impossible to teach a horse to lead well

in a little time, without one. This rein may be held in one hand, and the whip in the other, in order to make him understand what the words and the whip mean. This rein may with propriety be called a safety rein; for if it was always attached to the first horse, it would be a means of preventing much damage. The steadiest horse is liable to be frightened so as to turn right back again, and endanger the lives of every one near him. Now if there was a side, or safety rein, it would mostly be in the power of the driver to get hold of it and prevent much of the damage that otherwise would probably occur. When a horse is much frightened, and turns right back again from the driver, (which is generally the case,) it is then almost impossible to get hold of his head to stop him, before much injury is done.

The advantages of this safety rein, if generally adopted, would be numerous. That there is a want of management and science in the driving of horses, must be visible to every gentleman who travels on the public roads; for the heavy carriages are mostly on the wrong side of the road, and it is with the greatest difficulty they get to the right side; even then the passing

carriage very frequently comes in contact with the first horse: this might easily be prevented by the side rein. Again, when the carriage is kept level on the centre of the road, it goes much easier than when on one side, and if the side rein was kept rather tight, it would keep the first horse in the middle, or on the right side; if in the middle, there would be not that difficulty in bringing them out of the way, as there otherwise would, if they were on the wrong side; as, in that case, the whole of the road must be crossed, before the carriage could pass, which would require an additional exertion of strength on the part of the horses. Therefore by keeping the wagon, or heavy carriage, in the centre, or right side of the road, the driver would avoid much inconvenience himself, as well as leaving sufficient room for the passing carriage.

If the wagonner would refrain from whipping the horses on the near side, and have a safety rein to the first horse, there would be but little difficulty in making him go straight and bold in the middle of the road; the peculiar words being generally understood by the other horses are quite sufficient for the driver to use. For instance—"haw," if he wants them to con-

oward him; or "ait," if a little off or from him. These words may be coupled with the horse's name, or "ait, my lad," or such like expressions; but the whip should be ready to make them obey, and then, in a little time, there would be nothing wanted but the usual words, to make them do their work in a proper manner.

Another important part is, the being able to make them work freely and pleasantly together, and to obey every word that is spoken to them, before a colt, or young horse, can be put into the team with any advantage; therefore, when the wagonner wants them to start, he should never speak but once to them, and then in as pleasant a manner as he possibly can: "gently" is a word that might be used, and is quite sufficient to start them. It is necessary that every horse should distinctly hear the word; and, at the same time, the eyes of the driver cannot be directed strictly upon them; and, if possible, he should stand in such a situation as to be able to reach any of the horses with the whip, which should be immediately done, if they do not instantly obey the word of command; and, if it is a requisite, hit them rather severely on a

tender part; but he should not be in sight of the horse that he applies the whip to, if he can help it. He should never stand in front of the horse to whip him, for that is sure to make the animal watch him, and never more work freely with the other horses. When this system has been persevered in for a short time, there will be nothing wanted but a pleasant word, to start them off as they ought to do, the moment the word of command is given: when this is the case, there is little difficulty in putting a young horse into the team, and making him work well in a short time; but if, on the contrary, it requires a considerable time of driving to start them, during which, the young horse has made several starts and cannot go; by which means his temper is so ruffled, that he defies all management for a considerable time; and frequently he is thereby completely spoiled: therefore it is requisite that they should start the moment the words are spoken to.

Before I proceed with the young horses it is necessary to complete the work of the old. When they are started, the work is not finished in the eye cannot be kept too strictly upon them, and if any horse does not perform his work

he ought to do, he should be touched with the whip rather lightly; if this has not the effect, he should have it more severely, and on a tender part, if thought proper. But the driver should not be within sight of the horse: and likewise, he should have a whip of considerable length to drive a long team with, in order to whip on either side, as appears most proper, for if they are always whipped on the nearest side, they will get a trick of hanging off from him. To do their work with ease to themselves, they ought to go on as straight as possible; for that reason, it is very improper to whip them always on the near side.

Another absurd practice prevails among wagners, which is, if a horse is too free at work, to rein him up tighter in order to keep him steady: this greatly contributes to ruffle his temper and make him freer; then they put the whip to redden him, and caress him; or, in other words, to soothe him, and give him encouragement: all this produces quite the contrary effect. Now if a horse is inclined to be too slow, he should have all the encouragement given him that is possible. Probably it will be necessary to give him the whip a little severely; but the moment he does

more than his share of the work the whip should be put before him, and encouragement given him: by this means he will become more free. The free horse should have as little notice taken of him as possible, and, if convenient, kept before him: by so doing, he will soon be brought to work well and freely with the other horse. When this is the case, there will be but little trouble in breaking in a colt, or young horse.

It is a usual thing with some waggoners to proceed entirely up a hill without once stopping the horses. If it is a long hill and a heavy load it is very proper to stop them sometimes, that they may gain their wind, and the muscles their strength. There is certainly an inconvenience attending the stopping of horses on heavy ground, in their not starting together when they do this, it must, of course, distress those that have to start the load again; but on the contrary, they start together, (which they will do when they are thoroughly used to it) then it is best to stop them, and scotch the wheel, before they have spent too much of their strength, which will make them start freely. Again, when the word of command is given for them to stop, it is very essential that every horse

should distinctly hear it, or they will soon get a trick of stopping of their own accord, which should never be allowed. When horses work well together, and start together, they will take a reasonable load up any hill; but, it sometimes unavoidably occurs that they ought to draw at a standing pull, or what is called a staw-heft. This seldom occurs, or at least ought not frequently to occur with agricultural horses. But horses that draw timber and other heavy weights, are frequently obliged to draw at a standing pull, and whenever this happens, the horses ought to stand at the stretch of the chains as near as possible, and then you may bid them start; but this cannot be done in too mild a manner; the milder the wagonner is with them, the oftener they will draw: all that is required is to stand and watch them, and as soon as they have bended together, they ought to be immediately stopped, (for it is useless for them to continue drawing after they have had a long pull), and to stand a minute or two to recover their strength, and to prepare themselves for a better pull, which they will mostly do: but it is seen that the horses do not exert themselves, they may be bid to go in the same mild

way as before, and as soon as they have commenced drawing they should hear the whip, which will mostly be sufficient to make them do their best, if they are driven in the manner as before directed; but if it is seen that any horse does not his best, he should have the whip given him rather severely; and when they have had a fair pull, they must be stopped as before. If after doing their best, and trying three times successively in this way, and it is evident that they cannot go, it will be useless to try them any more, as they will get weaker every time: and if horses are drawn too often at those standing pulls, they will mostly get false way of drawing.

If the wagonner has any suspicion of a horse turning restive, he should take care that he does not start first; if he does, he will generally refuse to draw any more. When a horse of the description will start first, it is a safe plan for the wagonner to take hold of his head, and hold him steady till the other horses start, and then he will draw with them. And also he should be mindful to stop this horse as soon as he has had a pull. A horse of a restive disposition should never be whipped, nor cherished much.

when he draws; for both have a tendency towards making him refuse to draw. When he refuses to draw, the wagonner may give him a severe lash with the whip, when the team is stopped; after which he should not be suffered to draw till the other horses have commenced drawing. If the wagonner can start the other horses without whipping them, and without the restive horse starting first, it would be better for him not to lay hold of the restive horse: little or no notice should be taken of him, but particular care should be taken that he should be stopped when he has had a pull, (as I have before observed) by so doing, the others generally will stand and draw a great number of times; in fact, it is possible to train a horse to almost any thing.

When a very restive, or spirited horse, is going to be put into the team, it should be done when not overloaded, or the cure will be uncertain; therefore he should be put in when the others are able to go without him. I have seen it necessary to draw an unruly horse along for a considerable time, and afterwards he has become as good a drawer as needs be. It is utterly useless to whip him while he is in that

stupid state; it is better to put him in when the wagon, or cart, is empty; or when at plough, and learn him to walk with the other horses; when he has found out their step, and his stupid temper is gone, if he does not perform well, that is the time for him to feel the whip of the wagonner, rather lightly; if he performs well, cherish him. But if he is too free at work, the wagonner should not, by any means attempt to keep him back, for that would be sure to make him a random worker.

When it is intended to break in a colt, or young horse, it is necessary to handle and tame him a little before he is geared, and also to put a bridle, or breaking-tackle on him, and lead him about a few times, in order to make him understand the bridle: it is also proper to gear him a considerable time before he goes to work, perhaps twenty minutes or half an hour, and let him continue eating; if he refuses hay, he should have some corn. It will tame him very much to let him stand eating, with the gears on, for a considerable time. When he is put into the team, the wagonner should recollect to carry the whip on the wrong, or off-side of the horses: if carried on the right, or near side

It mostly causes the in-colt to hang from him for a great length of time, and, in the case of some, will never forget it; therefore the wagonner should strictly guard against it. If it is in the power of the wagonner, he should never allow the colt, or young horse, to start before the other horses; if they start together, he will generally go on without any further trouble. If he turns stupid, it is right that the wagonner should wait a little till his passion cools, and start them again. If he turns stupid the second time, the whip may be moderately used; but still keep going on with the other horses, even if obliged to drag him for a while, as it is best to wait till his passion is over, before he has the whip severely. If he is inclined to be too free, no endeavour should be made to keep him back; but if any attempt is made, it is sure to make him an unsteady worker. This is the best time for him to find it out how to work with the other horses, as they are sooner tired when first started, than any other time. If the wagonner perceives that he is inclined to be too slow, he should not whip him much, if any, the first day or two; but let him find out the step of the other horses, and then the wagonner should

endeavour to make him answer the whip by whipping him on a tender part. The best time to commence this treatment, is a short time before the horses leave off work; then the waggoner should endeavour to make him work or perform well, and cherish him as much as possible; by which means, when he comes to his work again he will expect to perform the same as before. If a slow colt was kept a work for any great length of time after this treatment, the good effect of it would be lost but by pursuing the before-mentioned treatment, he will soon be made a good and free worker.

If the driver thinks the colt is inclined to be too slow, he should, the moment he performs his work well, put the whip before him, and pretend to keep him back. In this instance horses very much resemble the human species; they are prone to be stubborn, and are most inclined to do that which they ought not. The driver should not, therefore, let the colt know that he wants him to do more work; but only to do his own part with the other horses. The sagacity of horses is beyond conception; for which reason they ought to be driven with

much caution as if they were so many human beings; and then they will soon be made to work well and freely together; and there will be no need of the usual waste of words, and continual lashing with the whip, which is nothing less than unnecessary cruelty.

When a team is thoroughly broken in, and every horse perfectly understands the driver, then a plough might be held by gentlemen, even of the highest rank, for a few hours in the day. Where there is old and dry turf to be ploughed, the exertion, with a wheel plough, is not more than most gentlemen can bear; with the exception of running it round at an end: in fact, it is easier than walking upon even ground, and at the same time it employs both the eye and mind, and circulates the blood to the extremities, without putting the body out of form, or hanging the head in the least. This, coupled with the surprising effect of the fresh soil continually being turned up, renders this wholesome exercise better calculated for a thinking mind than any other. Moreover, when nothing is required but pleasant words to drive the team, there will be no reason why ladies of rank should not enjoy the salutary effects of

a newly-ploughed field : when the ground is sound and dry they might ride or walk near to the furrows, and inhale the fragrance of their mother earth. Such exercise, I believe, would have a better effect upon the health and constitution, than resorting to watering-places generally has.

If the beneficial results of this employment in a field of good aspect, were fully known such fields would undoubtedly be crowded to excess by persons of the highest rank in the kingdom : and would likewise tend to excite an emulation in the peasantry to excel in the noble science of agriculture.



SECTION IX.

ON

DRIVING THE COACH-HORSE

THERE is a great advantage in the method of driving the coach-horses, as the whip is always behind them ; consequently there is not so much skill required, as in driving a long team, as it regards the horses' tempers ; but nevertheless

They ought to be driven with judgment, and with as little waste of their strength as possible: their strength is the principal thing with which they have to perform the journey in a certain time; therefore the less waste of that the better. When they start, the coachman's eye cannot be too strictly upon them, nor the whip too ready to touch any horse that does not start at the same time, or regularly with the other horses. Indeed his eye ought to be employed in a two-fold manner; the road ought to be considered as well as the horses; and their strength made use of according to the state of the road. If this part of the driver's duty is properly attended to, their pace can be changed without ruffling their temper, or distressing them in the least; and it will very much relieve them by changing their pace, when it can be done without wasting their strength too much. A Coach as well as other horses ought to start as soon as the word of command is given; and if a young, or fresh horse, is put with the others, a person ought to stand at his head, in order to prevent him starting before the others; when it will be ascertained that he will stand good pull. If a restive horse is allowed to

start first, it generally ruffles his temper so much as to make it difficult to get him to go off; therefore it is necessary for a person to have hold of his head at starting, and lead him rather gently, till they are all come together, and then they will mostly go off without any further trouble. It is the best to be as still as possible in the driving of these horses; the eyes cannot be too strictly upon them; and if any horse is inclined to be too slow, he should be touched with the whip, and if he does not move faster, the whip should be again applied, and on a tender part, but as seldom as possible. If the horses together are not performing as they ought to do, the word of command should be given, and if this is unheeded, it is necessary to crack the whip just over their heads, so that they can hear it; but these mandates should never be given at a wrong time, or they will become vague and useless. If they do not obey when the word is spoken, it is the best to give them the whip on a tender part, immediately after the command is given.

If this system of driving is strictly persevered in, there will soon be no occasion for the use of the whip: and the punishment which

so frequently inflicted upon them will be avoided, as it not only makes them worse in their temper, but actually does them more harm than their work possibly can do.

When the coachman approaches the foot of a high hill, it is proper for him to put the horses at a greater degree of speed, and to continue at that speed a considerable way up the hill; when he should change their speed; but this should never be done without a motion of the reins, or they will soon get a trick of stopping themselves, which should not be allowed. The driver should be entirely mounted before the horses are put to their usual speed again, as it will be a means of wasting their strength to no purpose; the proper time of starting the vehicle is when the hill is sufficiently mounted, or when nearly on level ground.

When the horses are to go off in their usual speed, it is necessary either to stir the whip, or to give the word of command; if either of them is not immediately obeyed, then it is proper to give them the whip rather severely; and it should not be too ready to touch the horse that is backward in starting. If this point is strictly observed, a word will, in the course of a short

time, be quite sufficient to start them off at full speed.

There is generally too much strength wasted and too much pain caused to the horses, by stopping these vehicles with too much force. When once horses get into a trick of stopping all of a sudden, they will seldom, if ever, leave it off; therefore coachmen cannot be too cautious in stopping them, nor too easy in pulling them up. Indeed it is even better to allow the vehicle to stop almost of itself, if possible than to pull the horses up with too much force for if they are pulled up in such a manner they will be in danger of having the pole evens and never fail of being habituated to that incurable trick of wasting their strength, with stopping all of a sudden; therefore it cannot be too strictly guarded against, and the coachman should slack their pace, or pull them up easy, a considerable distance before he arrives at the stopping place.

If a horse is inclined to waste too much of his strength with stopping the vehicle, whip him severely at the first effort, and, if possible never allow him to acquire this injurious habit. It is essential to give this kind of horses the

four mouthful of water, a time or two in the stage; but they should never be allowed to stand after having drank the water.

Coach-horses should be reined up rather tighter than the horses of heavy burden, as they are mostly made neater about the head and neck, but no tighter than appears comfortable. The hames should be put on tight, and be geared little higher than the horses of heavy burden, that will allow them to lift up their knees and feet much better. The belly-band should be moderately tight, in order to prevent the collar choking them.

A great inconvenience is experienced in consequence of the hames of coach-horses being made all of one length; thereby the small horse is obliged to have his hames, or collar, longer than what is necessary, and consequently he has not the power he otherwise would have, if his collar and hames fitted well.

Nothing can be more improper, than to have the collar, or hames, hanging down the breast and outside the shoulder; therefore it is the interest of every one that finds horses for the purpose of running in coaches, to be mindful that the collar and hames fit the horse properly;

for that reason I have, in my pattern for hames explained in as plain a manner as possible, the manner in which hames ought to be made and put on: of all the different parts of harness that require strict attention, this is the most particular, as it affects both the power and the speed of the horse.

SECTION X.

ON

DRIVING THE BOAT-HORSE

THE driving of the boat-horses is nearly the same as the coach-horses, with the exception of the reins; and consequently there will be but little room for comment on the driving of them; at the same time it is but justice to the horse that the driving and management of boat-horses should be as perfect as possible, before they are thrown out of their present kind of work by the introduction of their powerful opponent—steam—as there are some persons who are proposing to use it instead of horses. Also it is perfectly right that every possible improvement

should be made: generally speaking, I believe that there are no horses worse driven, or more shamefully ill-used and beaten than boat-horses.

I shall endeavour to point out a system of treatment, which will be a means of that punishment being avoided, the infliction of it doing them more harm than their work.

A boat-horse has a certain quantity of work to do, and a certain portion of strength to perform that given quantity of work; that strength no more than his frame and constitution will allow; therefore the less waste of that strength the better, as over-exertion will sometimes hurt his constitution past recovery. One very improper practice is, wasting his strength with starting the boat with too much force out of the locks, instead of which the driver should take hold of his head, and hold him till the boat is completely afloat, and then let him hear the whip, or word of command for to start: if he does not immediately obey, lash him with the whip rather severely on a tender part: if he does not then perform better, repeat it in the same place, till he performs as he ought to do. But he should never be whipped when he performs well, or he will become sluggish, and it will accustom him

to bear any infliction of punishment rather than do the work; for it is not in their nature to bear both for any length of time.

With this kind of horses, as well as all other drivers cannot be too still with them; and the eye is not so much employed, as there is generally but one horse, yet it is necessary to be watchful of him, and if he slacks from his work let him hear the whip, or word of command the former is preferable. If he does not obey touch him with the whip, then, if he performs as he ought to do, he should be encouraged by patting him, and giving him cheering words. This may be done as he goes along with one hand, and the whip carried in the other, to keep him up to his work; but he should neither hear nor feel the whip while he is performing his work well: a little encouragement wonderfully revives his spirits, and causes him to work much freer than he otherwise would do.

SECTION XI.

ON

GEARING THE BOAT-HORSES.

IT is a usual thing for the proprietor of

boat-horse to find the bridle and the collar; and the captain of the boat the remaining part of the harness; consequently it has to be changed every time he has a fresh horse; which is generally done in such a hurry, as not to allow sufficient time to adjust and fit on the hames in a proper manner. As this is the most important part belonging to the gearing of boat-horses, I would advise the owner of every boat-horse to find hames, collar, and bridle for the same; at the same time having the hames geared a little higher than those of the slow horses, or horses of heavy burden, and fitted on well. If every owner of boat-horses was to find this part of the gearing, it would allow sufficient time for the hames to be fitted on as they ought to be; also it will require less time in changing horses. The hames ought to fit into the cavity of the neck, as I before directed in the draught-horses' gears. I refer my readers to the shop of Mr. Thomas Beardmore, Burslem, Staffordshire Potteries, for a pattern of hames.

The boat-horses ought to have water two or three times in the course of the stage; the fly-horses not more than six or seven mouths-at a time, the slow-boat horses a little more.

It is necessary to give them a little hay, or eorn, about the time of watering; but as boat-horses are generally upon a full allowance of eorn, it is highly essential to give them a feed of eorn in the middle of the stage.

Boat-horses have no need of cloths, as they are seldom delayed long on the road; but if it should so happen that they are obliged to stop for any length of time, they should be covered with something, or they will soon take cold, which should always be avoided, if possible.

The heels and feet of these horses, as well as of the coach-horses, should be kept clean: the best time to wash them is as soon as they come from off their journey, and before they go into the stable; but their heels, in every instance, should be wiped dry immediately. Their heels and feet ought to be washed at least once a week with urine, as it toughens and strengthens those parts very much. Their legs should never be washed, except they are immediately rubbed dry; yet they may be wiped all over with dandruff-wisps in the hot weather, and well rubbed afterwards.

The same rule may be observed in the feeding of these as of other horses.

They should never be allowed to have their water the last thing at night. It is also necessary that they should have a bran or potato mash, about new-milk warm, the last thing at night, three times a week at least. If a table-spoonful of the powder before prescribed, be given to them in their mash at night, a few times in the week, towards the spring of the year, it would be of great benefit to them, (they may have their water in the usual way) and it would clear their skin, and cause them to do more work.

SECTION XII.

ON POLLING OF HORSES.

It is necessary to pull a considerable quantity of the hair called the mane off coach and boat-horses, as it keeps them much cooler; but it should never be cut off, as some do, where the collar and bridle rest. By so doing, they take the protection away which nature has given them. When the mane is cut off from under the collar, it becomes so hard and stiff, that

the weight of the collar soon makes the horse's neck sore; instead of cutting it off, it should be carefully turned all one way under the collar which will greatly protect the neck from the injuries the collar is apt to cause. The same may be observed in regard to the part where the bridle rests upon, for we often see horses disfigured about that part as bad as if they had the pole-evil. Now if the mane was suffered to remain on that part it would greatly protect the pole against the pressure and friction of the bridle; therefore, it is very wrong to cut any part of the mane off, of any horse, as they look better, and may be disposed of to greater advantage with it on than off.

It is a very common custom with some to snip or singe the hair completely out of the ears; this never should be done, neither in winter nor in summer: in the latter it gives the flies liberty to get into their ears and tear them in such a manner, that they are completely ungovernable, particularly in very warm weather, when the flies are brisk. It is equally blameable to deprive them of this protection in winter as in summer, as a heavy storm rain or hail renders them equally ungovernable.

the flies. But these are not all the disadvantages attending this absurd practice, as it also gives the cold winds free access to their heads, which will frequently occasion them to have colds. Yet it is proper to singe or snip the long hair from off the jaws of coach, boat, and agricultural horses in the spring of the year, but not in the autumn or winter, as it will cause them to take cold much sooner than if it was suffered to remain on. Also it is right to leave a considerable quantity of the mane and tail on agricultural horses, in order to protect them from the cold in winter, and the flies in summer. This is all that is necessary for me to say on this part of the treatment of horses, that they be at work all the year through; but being asked my opinion about clipping horses, I have thought proper to observe that it befits a long-tailed horse better for hunting in the autumnal part of the year, but it cannot be expected that he will cast his coat so freely or kindly in the spring, as if nature had followed its proper course.

It is not right to clip the hair from off the heads of draught horses, for when it is suffered to grow it prevents the dirt from getting into

the cavities of the heels, though it sometimes hangs considerably in the hair, still it most prevents it from getting into the cavities of the heels, and prevents the cold winds from chilling those parts too much.

Some persons have a great objection to a horse that has any quantity of hair about his heels: these objections have been carried to such a height in some parts of the country, that if they see a horse with a considerable quantity of hair about his legs, they will not stop to look at his action. But the action of the horse depends much more on his shape, than on the quantity of hair he has on his legs: for some of the strongest and most active horses that ever saw had hair on their legs, at least two inches long; and sometimes the fastest walkers and trotters have a considerable quantity of hair on their legs: but it is always the most preferable when it grows neatly down the back part of their legs.

The most active mares of this description, believe, are the best to breed harness and saddle horses from; and also hunters, providing they are by a high-bred racer. This kind of horses is distinguished by having very lit

no long hair on their legs. It is a very wise thing to preserve the true breed of all kinds of horses, or the first cross will be completely lost, which would be a great disadvantage, for they of the first cross are generally the stoutest and best, both for harness and the saddle.

SECTION XIII.

ON

THE BREEDING OF HORSES.

WHEN mares are worn out, either by old age or some incurable disease, it is customary with us to put them to the horse for breeding: under these circumstances, how can it be expected that they will bring forth good and stout horses; as this is the time, of all others, when health and strength are most needed? It is a rare thing to see a stout horse bred from an old or worn-out mare. There can be no advantage in breeding from such kind of mares, as they can generally do no sort of work when breeding and suckling; and their offspring is

of little use; and if we look at the extra keep it takes to support this sort of breed, certainly the greatest benefit would be derived in ceasing to breed from this kind of mares, as one horse bred from a young and stout mare will do as much work as two of the former, and require less nourishment. The young and stout mare will not require more than a week, or a fortnight's rest in the whole time of breeding and suckling; for it is safest to keep them at regular work till the day they foal, provided they are not knocked about in the shafts.

I shall now endeavour to point out the right sort of mares to breed from:—Some say, a good horse is never of a bad colour; but I say, a good horse of a good colour is better. It is contrary to reason to say that there is nothing in the colour of horses: they might as well say, a scientific cock-fighter cannot tell whether or not a cock is stout by his colour; or, that a black and white cow gives as good milk as the deep red cow: therefore, as colour is a great consideration in the value and strength of horses, I will mention the good and bad colours:—Some people say, that grey is a tender colour; but I rate the gray horses foremost, if their colour is right

ch as dark or iron grey, or roan, with dark or black legs and mane, and tail of the same colour; consequently the white, or light grey, with white legs, and white mane and tail, is a tender colour. If there is one colour more tender than another, it is, according to my opinion, the pale chesnut, with white, or pale-coloured legs: if there is a white or flaxen tail, and mane, with this colour, it is very bad; indeed the white or flaxen mane and tail, always denote a tender horse; but if a horse is of a crimson, or dark chesnut, with dark coloured or black legs and mane, and tail of the same colour, it is not a desirable one. The black horses may be classed next to the chesnûts. To say that there are no good black horses would be wrong; but still they are not equal to some of other colours. The rich brown or bright bays, with black legs, are more preferable than the blacks; but black horses, with black legs and brown muscles, are the best of this colour; but the white legs and white face denote a tender horse. There is a puddy, brown colour, that is not desirable, pale coloured about the flanks, with legs white, or the pale colour, denote a tender horse. I will conclude this section by observing, that the

iron greys; roans, rich browns, and bright bays, with black legs; rank foremost as it regards colour.



SECTION XIV.

ON THE SHAPE OF HORSES.

A SHORT horse is preferred by many persons but a short horse is not so powerful as one that is lengthy. The long horse, with a short back is most preferable; his neck and quarters cannot be too long, and his shoulder-blades pointing towards the middle of his back, and consequently the shoulder points forward, pointing up towards the neck. The hips should come pretty forward, and point down towards the short ribs. If he is a considerable length from the hips to the rump, it forms a long horse with a short back; he should be well filled up along each side of the back bone, and over the loins with firm substance. If his body is nearly round and thick, and broad across the breast, and his arms and haunches strong, and below the knee the sinews compose half of the leg, this form

what is called by some, flat-bone; the bone, I believe, is intended to be round; but if there are plenty of sinews, it forms a flat leg: all these denote a horse of great strength. If a horse's knees and hocks are pretty near the ground, and there is a considerable length above, it forms a tall horse, with short legs. A very active horse is never seen with his knees and hocks a great way from the ground.

It is the opinion of some, that a horse is not rightly formed without his hips join his ribs, or within an inch or two: but that is too near, or if he is too close in that part, he cannot get his breath so well as the horse that is slack in the loin; but either extremes are wrong, as horses that are tight in that part mostly go broken winded, and if too slack, they mostly slip with the hind feet, and are not so strong as the horse that is of moderate length in that part.

The neck should be a considerable length, deep and strong down by the shoulders, and taper and fine about the pole and opposite jaw-bone, that the head may move easy. The head should hang straight down and move easy every way, and particularly towards the breast. If a horse's head seems fast, and his nose pointing

out, and will not come easy in, he is in danger of having the pole-evil. The ears should be fine, and finish with a sharp point at the top and moving. The eyes should be clear and bright, the eye-lids clear from wrinkles, and stand boldly open; if, on the contrary, the eye-lids are all over wrinkles, and it appears that he has great difficulty in keeping his eyes open it denotes that he will be blind in the course of a short time. The jaws should taper and be fine towards the mouth; and the lower lip should not hang down from the upper; his nostrils rather open and large. The foot should spread out from the fetlock gradually down to the ground, and should be wide and open about the heel. If, on the contrary, the foot is straight down, it does not give way to the more sensible part of the foot, and so causes lameness. This may be compared a person putting on a pair of shoes that are too small for him, for when he begins to walk in them he will soon find out the inconvenience of having his shoes too narrow; as when his weight presses on his feet, the shoes contract the motion of them so much, as to cause lameness: so also, when the hoofs are too narrow, they contract the motion

f the feet in a similar manner, and so cause lameness; therefore the foot should spread out, and the heel be open, with a sound, strong frog.

SECTION XV.

ON SHOEING OF HORSES.

SHOEING of horses is at present very much in the dark, for most writers only refer people to a good shoer; and those men mostly know sufficient (in their opinion,) that they will not be taught any thing; but the man that knows the horse's gait the best, is the most likely man to be acquainted with the manner in which he ought to be shod. I shall, therefore, endeavour to point out in as plain a manner as possible, the most advantageous method of shoeing all kinds of horses.

First, the young horse,—as this is the best time to get the foot into a proper form. Colts' feet are often crooked, the hoof spreads too much on one way, and consequently too little the other, and as they generally tread heaviest on the side where there is the least hoof, they will, when

they begin to work, if their feet are suffered to remain in that crooked form, soon become lame: for which reason, great care should be taken that their feet are made perfectly straight when young. If a young horse's foot is too little on one way, the same side of the foot should be pared a little hollow, and the inside of the shoe be raised a little up into the foot, and the outside be sloped off. If the foot is too narrow at the heel, hollow the foot on both sides, and raise both the insides of the shoe up towards the foot and slope the outsides. (See the patterns for young horses' shoes.)

This method of shoeing will soon get the foot into whatever form is wished.

The shoeing of coach and saddle-horses is the most important, as these kinds of horses are generally distressed to such a degree, that they are scarcely able to lift their feet high enough to miss the ground, and thereby frequently have their knees broken. In a general way, people like to keep their horses' feet large and long. If the foot is longer than necessary, and overbalanced with a lump of steel at the toe of the shoe, in my opinion, it is impossible for an horse to prevent himself coming down, when

distressed, and then he is called a tumble-down horse, when in reality, it is the fault of the shoeing smith. Instead of a lump of steel on the toe of the shoe, that part should be sloped off, as directed for coach and saddle-horses shoe; there is a very great difference between having the foot long, and a lump of steel on the toe of the shoe; and having the foot short, and the toe of the shoe sloped off. It is very absurd to keep the foot longer than what is necessary; as it not only weakens it, but makes the horse more liable to sprain the back sinews, and also to come down. If the foot is straight, and the horse goes straight, the shoe cannot be made too level, and also the foot the same. If the horse cuts the heel part of the shoe on the contrary foot, it should be sloped off and not project wider than the hoof; and the hoof kept a little narrower in that part. If the foot is tender in any part, from gravel or any other cause, pare the tender part down in order to throw the weight on the sound part of the foot. It is proper that the shoes for agricultural horses be turned up a little at the heel, to prevent them from slipping on slippery ground, but the turn-up should not be sharpened, and it should not be more than

half an inch: the horse of heavy burden in the same way. The draught horses' feet should be kept rather short, as they have considerably more power when their feet are short, than when they are long; indeed, when the foot is properly pared down it grows much stronger and the horse rendered, by that means, more vigorous, more active, and better in every respect.

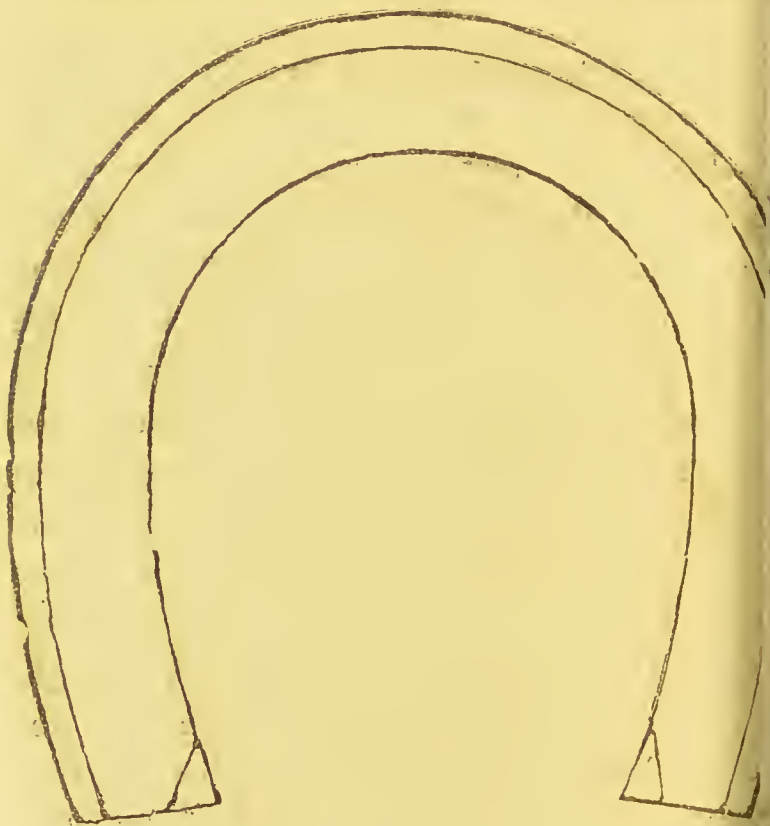
When a horse is newly shod, the hoof and clenings should be well washed with stale, or the sock of the stale, as it will greatly strengthen the foot, and cause the clenings to set fast; but instead of doing so, it is the system of some to grease or oil the hoofs, but this causes the clenching to rise, and very much weakens the foot, as it is of a flexible nature; therefore the oiling renders it too much so, for which reason it is always improper to grease or oil the feet.

I am fully confident that if horses were shod and harnessed in a proper manner, seldom would there be a broken kneed horse of this kind. But of all horses, the saddle horse is in the greatest danger of breaking his knees; yet a horse of this kind is shod as directed in the pattern for saddle-horse's shoeing, and his sac

le made properly, seldom, if ever, will he be in danger of breaking his knees. But the form of the saddle is as equally important as the form of the shoe; on which account I shall proceed to make some remarks on the form of the saddle.

The saddle ought to press as little as possible on the top of the shoulder blades: it ought to be sloped off in that part, and press more on the lower and thick part of the shoulders; therefore if the horse's body is not well made, and thick immediately behind the shoulders, and the girths set on the back part of the saddle, it puts the saddle completely over his shoulders, and then it is no wonder he breaks his knees; but in this case either extreme is wrong, for if the saddle is too backward, it distresses the hinder parts too much, and sometimes causes spavins, curbs and overheats the loins and kidneys, which is, I believe the cause of so many horses being afflicted with inflammation of the kidneys; therefore, if the saddle is kept perfectly clear from those two points, then it is right.

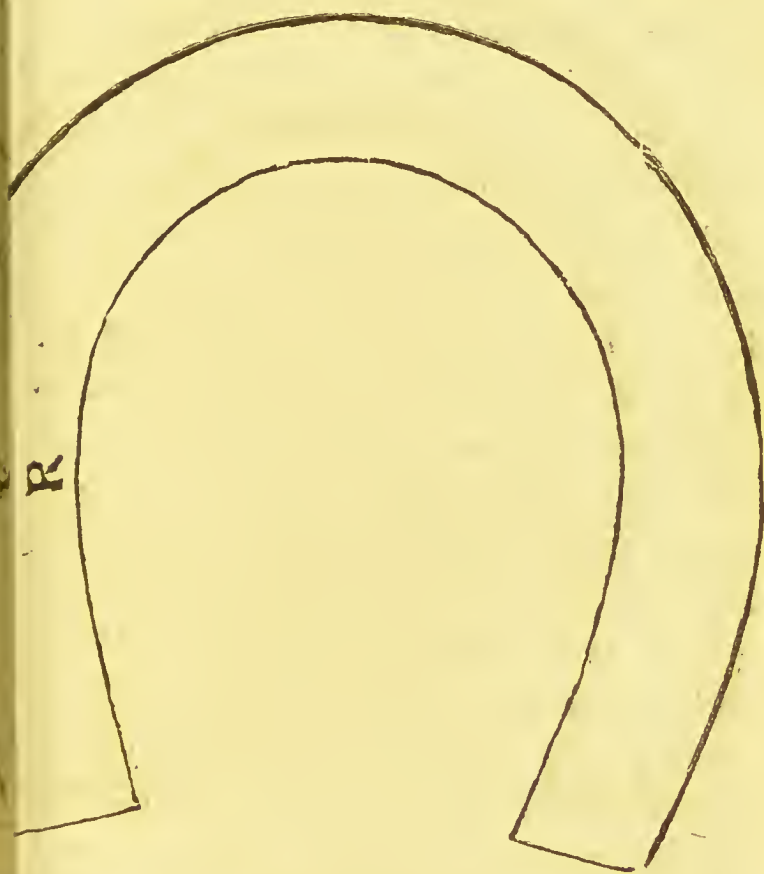
SECTION XVI.

PATTERN OF YOUNG HORSES'
SHOES.

It is not proper to slope off the toe part of the young horse's shoe, till he is made a saddle horse, or runs in harness, as the full toe w

ch young horses to lift up their feet much
ter, and when they come to have the sloped-
shoe they will experience greater advan-
e by it.

INSIDE OF A YOUNG HORSE'S SHOE.

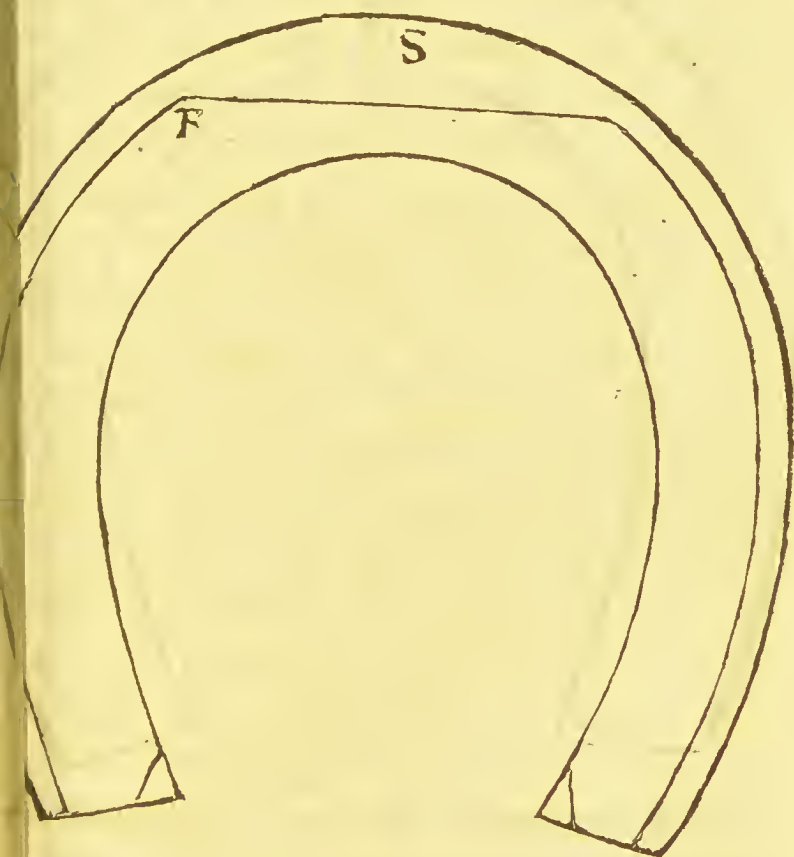


If, young horse's foot is too narrow on the
outside, which is generally the case, hollow that
side of the foot a little, and raise the inside of

the shoe up towards the foot, as at R, and slope the outside off, as at S. If the foot is too narrow at the heel, hollow both sides of the foot and raise up both sides of the shoe, as before directed, and then the foot will soon spread out wide enough. Indeed a horse's foot may be brought into almost any form by shoeing; for if the shoe is hollowed, it will contract the foot narrower; therefore if the foot is straight, and wide enough, it ought to be pared nearly level and the shoe made completely level. The inside of the foot ought to be pared a little hollow, that is, over the sensible part of the foot, and the hoof part as level as possible.

The greatest care should be taken to get the foot right when young; if the foot is got into proper form when young, there will not be the difficulty in shoeing, when at full work and full grown, as is generally experienced; also there will seldom be a horse that cuts. Therefore every colt's gait should be particularly observed and if it is thought that there is danger of his cutting, great care should be taken to spread the foot out toward the outside, and the outside of the shoe should be made thicker, and it will fling the feet out enough to prevent his cutting.

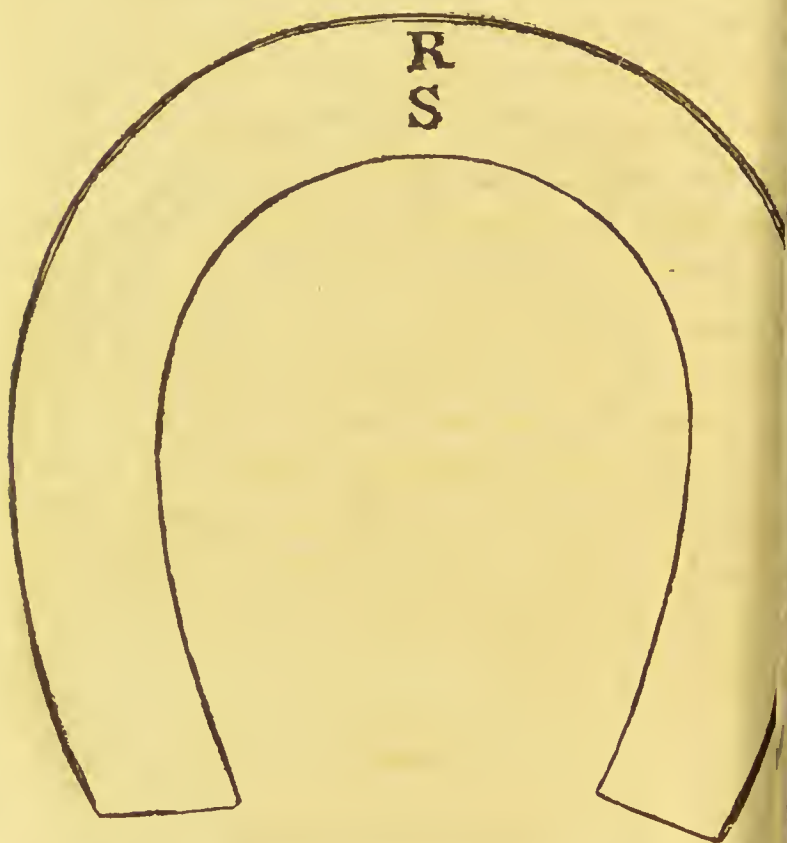
SECTION XVII.

PATTERN OF COACH AND
SADDLE-HORSES' SHOE.

THE toe part of the shoe should be sloped off,
at S, and it should be fullered across, as at
line F. The shoe may be fullered or rough

ened in different parts, in order to prevent the horse slipping.

INSIDE OF COACH AND SADDLE-
HORSE'S SHOE.



Steel this side of the shoe as at S, and raise the toe part of the shoe up a little into the foot, as at R.

The toe of the foot should be prepared for the shoe by passing a rasp, of half-round form

or a little more, level, across the toe-part of the foot; and if the steel is put on the inside of the shoe, or rather in the middle of the iron, it will prevent the shoe from wearing completely down to the foot; and also it will allow the shoe to wear down into an easy form; we should always allow nature to dictate for itself. If the smith would always look at the horse's gait before he commenced shoeing him, he would be better able to shoe him right. If the horse presses out his hocks too wide, it is proper to thicken the shoe on the outside, and endeavour to spread the foot out a little wider, by which means it will wonderfully support his hocks. If his hocks are too much in, the contrary course should be taken. It is not right to slope off the toe-part of the hinder shoes, or it will very much impede his speed.



SECTION XVIII.

ON THE FORM OF PLOUGHS.

HAVE no preference either for double or single horses at plough in particular, as this, in my

opinion, depends entirely on the ground that has to be ploughed: but if ploughs were made in a proper form, and the horses put to them in a proper manner, there would not be so many objections to single horses. If the plough-beam was short, and the end of it higher from the ground, sloping up in the direction of the foot-chains, it would be a great advantage over having the point of the beam near to the ground. Some have expressed their opinion that if there was not a long beam to the plough, it would not run so steady; but this is a mistake. If there is any advantage in the length of anything, it is in the length of the steering chain. But a long beam is sure to spring and give way and then it cannot run steady, nor easy, for the horses. Now, if the beam was short and strong and a considerable height from the ground, the steering-chain a moderate length, and the bend or crank, to allow the foot-chains to hang a little down from the hames to the bend or crank but not too much so, or the weight will be too much on the horse's neck. The last horse ought to be the lowest, and the first the highest, then the line of draught will be nearly on a level; this, coupled with the horses walking on the

solid furrow, will leave little room for advocating the cause of double horses, if the single horses were driven as they ought to be: but this, I am confident, is not the case; for if notice is taken of ten teams at plough it will be perceived there is not, perhaps, more than one last horse out of the ten that does any thing towards drawing the plough, except at the end of the furrow, and here every horse is distressed, in turns; but the first horse is distressed more than the others; as every horse is made to draw the whole of the plough as he comes to the end of the furrow, and the first horse being the furthest from the plough, it must, of course, distress him the most, and so on in proportion. Now if the last and other horses kept regularly drawing, as the first horse goes up to the edge, they would go much easier, and with much more steadiness. The drivers ought to be very cautious in not whipping the horses much at an end, for if they are whipped much at an end they will not go steady up to the edge. The horses not working together, and being unnecessarily distressed at an end, are the greatest objections to single horses. In these respects, double horses have especially great advantage;

and more particularly on light and sound land where treading is of service to it; but if the land is heavy and wet, the plough made in a proper form, and the horses work freely and steadily together, (which they will do, if driven as has been previously directed) then single horses are much more preferable for such sort of lands. But to proceed with the form of the plough:—

The greater part of ploughmen have the coulter a considerable distance from the share, and the share four or five inches before the coulter when this is the case in stiff land, in my opinion, an additional horse will be required; the share going so much before the coulter, it has, of course, to lift up the furrow and the space between the coulter and share must, in consequence, hold the furrow fast. If locked irons were more generally in use, it would be of great advantage; and as few smiths know how to make them, I shall endeavour to point out the plan of what are called locked irons:—When the coulter goes before the share, it should be brought level to the ground, and a small hole made to admit the point of the share into it, and then they are, as it were, locked together,

and the stiffest ground will not make them give way. When the irons are thus locked together, the plough must, of course, go much more easy and steady; and the coulter going before the share, gives the furrow liberty to turn without lifting it up; and the share and coulter being attached together, cut the furrow completely out, which must necessarily be a great deal more easy to the horses, than if the coulter were about two inches above the share, and about five behind it. When it is in this position, it certainly requires more strength; and the locked irons generally cut a more square furrow. In my opinion, the difference to the horses, between the two plans, is about one out of four; therefore if locked irons were more generally used, it would be of great advantage, as they are better for all kinds of lands, with the exception of ground that is very gravelly, or stony, and even there and every other place where the locked irons are not adopted, it is proper to have the coulter point very near that of the share, and the coulter to stand in a slanting direction, and it will not work clear and easy.

SECTION XIX.

ON DRAUGHT.

It is not a little surprising to hear men argue that low wheels go easier than the high ones; and again, they say that the hinder wheels should be very high, and the fore wheels very low. It is certainly an advantage to have high hinder wheels; but if the fore wheels are very low, the shafts point up, and the fore horse draw down at the last horse's back. Now, if the hinder wheels were ten times higher than the fore wheels, the carriage would remain where it was, without it was drawn by some power; and the weight on the carriage would force the hinder wheels backward, as much as it would force the fore wheels forward; but wheels of moderate height are the best; that is, the hinder wheels proportionably higher than the fore wheels, so as to get the steering pole and the shafts as near as possible in the line of draught with the chains. Every one that has made use of a lever must know that high wheels go easier than low ones; for from the centre of the axle-tree to the ground is leverage, and that is the

reason why a horse can draw more with a wooden axle-tree than with iron arms, as the wood axle-tree gives a little more leverage.

A great fault is frequently committed by wagoners, in loading their wagons too much on the fore wheels; they attempt to justify it, saying, It picks forward. But this is a mistake, for it picks completely into the ground; and if the fore wheels go into a low place, all the weight goes on them; and having less leverage than the hinder wheels, the wagon would move much easier, if part of the weight remained on the hind wheels. And when the weight is chiefly on the fore wheels, it knocks the shafts of the horse about much worse than when it is loaded level, or rather more on the hind wheels. When loaded in this last manner the weight is further from the horses; but the additional leverage of the hind wheels fully makes up for that disadvantage; therefore to load a wagon level, or rather more on the hind wheels, is certainly the best way.

I have lately read an account, written by an author of some note, which went so far as to say, that a horse could not draw a carriage over a molehill as high as his breast. Now, I sup-

pose that worthy individual knows more about the power of steam, than the form and power of a horse; for if a horse has short legs, his breast is not far from the ground; and some of those horses are a considerable height above, which makes a tall horse with short legs. Now a horse of this description allows the burden to be attached to his shoulders about half a yard above his breast; and if the centre of the wheels is also that much above his breast, and the horse has strong haunches, and a good hind quarter altogether, if he will draw his best, there is no doubt but that he will draw a carriage over such an obstacle. A two-inch stone is but a small obstacle to a wheel about six feet high. The author before-mentioned seems to think a tall horse is every thing. I have no objection to a tall horse; but then I should greatly prefer him if his legs were short; for long legs require more strength than short legs; even as a long pickaxe requires more strength than a short one, to lift the same weight.

There are many persons, who are in some degree acquainted with the form and make of horses, that have come to a conclusion, that when a horse has a fine shoulder he is perfe

d right. This is certainly a great advantage for the saddle, and there are no objections to it; but if he is not strong in his hinder parts, he cannot draw a great weight; for when a horse draws with all his force his fore legs scarcely touch the ground, and, consequently, most depends on his hinder parts for drawing, and indeed, galloping, or any other pace.

SECTION XX.

ON THE FORM OF HARROWS.

THERE is nothing in agricultural implements that demands our serious attention more than the form of ploughs and harrows, as it respects the bringing into use those implements by means of the strength of horses; since steam can never be applied in the use of these implements with any advantage; therefore if I make any improvements my labour will not be in vain.

One great disadvantage that most agricultural horses are subject to, is, when there are three horses drawn by a swingle-tree, and the horses attached to each end of it, which is the usual

way, then, in that case, there will be nearly double the weight for the off-side shoulders which is, of course, a great disadvantage to the horses. To remedy this, the cap on the near end of the swingle-tree should be a considerable distance from the end, (I mean that to which the horses are attached) in order to give the off-side chain an additional leverage. When harrows are attached to a swingle-tree, the off-side harrow hangs nearly out of the length of the swingle-tree, and the near harrow within. When there are three or four harrows drawn by a swingle-tree, the effect is nearly the same. For instance: if there are three harrows, the outside ones are generally broader than the middle one and as the off-side harrow is drawn by the near corner, it hangs nearly out of the length of the swingle-tree; and as the near side harrow is wider than the middle, and also drawn by the near corner it flings the two off-side harrows too much to the further end of the swingle-tree, and as there is an extra length of chain for the off-side, it causes nearly double the weight for the off-side shoulders. Now if they must draw equally there should be as much of the harrows out of the near side chain that the horses draw at, as

the other, and a little allowed for the extra
stance of the off-side harrows from the horses,
which causes those harrows to lie the heaviest
on the ground.

There does not appear to be any thing that
baffles the skill of agriculturists more than the
form of harrows; yet it is but justice to say,
that some very laudable improvements have been
made lately in the form of harrows. The best
is that which draws straight, and not from
the corner, and the teeth set zig-zag, so as to
cover all the ground. If the harrows draw straight,
they will harrow the rains of the field much
better. Four small harrows are the best to
draw a five-bout but with, the two outside-
ones being about the same size as the old-fash-
ioned four-bound ones, and the two in the middle
of three-bound ones. As small harrows work
the rains the best, they ought to be coupled
as they cannot ride upon each other. It is
a very good plan to have two small rollers be-
tween each harrow, as it will prevent them
tearing each other to pieces, and cause them
to work much better. If the rollers have pins
through each of them, and a noose above and
below the bound of the harrow, and work on

each end of the pins, the straps, or links, from the other harrow to the roller only to have small holes to admit the pin through them, the couplings ought not to allow the harrows to spread wider asunder than the distance from one of the harrows to another, and the rollers between keep the harrows a proper distance from each other, and also from riding one upon another and knocking each other to pieces. There is another excellent way of coupling harrows, and that is, with the two pins through the bounds of each harrow in the regular coupling part those on one harrow to have a hole to admit a small bar of iron; the other harrow, instead of having small holes, to have small bows, to come within the other pins for the bar to work in. The above is a very good way of coupling harrows, as it keeps them a proper distance from each other, and prevents them from riding on each other, and also from knocking each other to pieces.

SECTION XXI.

ON HARROWING.

It is not a little surprising that there is room for improvements on the harrowing part of agricultural operation. As it is a very rare thing to see it performed in a proper manner, I shall endeavour to show the right way in which it should be done.

At the commencement of harrowing a field that is up hill and down, (I mean when one end of the field is higher than the other,) it is proper to break the ground in down hill; for instance:—If the commencement is made at the top of the hill, it, of course, breaks the first round, and the harrows may return up the same place. Again, if the team are harrowing e-bout butts, or butts that the harrows will reach at once, then it is proper to go down a fresh rain, and up the one that was first begun then go round two butts at the top of the field into a fresh rain, and round one at the bottom into the one that was previously harrowed down. If the commencement be made at the fifth and side of the field, and the turn-

ing is always made "come again," then the field is done, which is of great advantage, and attended with much more safety, as the harrows will turn better that way than the other; and going round two butts at the top, and one at the bottom, gives the harrows room to turn without any danger or inconvenience. Going over the field in that manner is, what is called—A bout in a place; but that is very seldom sufficient to finish it off; if it is half harrowed first, let it remain in that state for some time, then go over it again, it will work much better than finishing it off as the harrowing is gone or with. It is much easier for the horses to break the ground in down hill; and the ground works much better that way. It is wrong to go over more ground than can be finished the same day; so when a considerable portion of ground has been gone over, it is proper to go to the place where the commencement was made at; and if harrowing over once more in a place will be sufficient, it may be harrowed up one rain and down another. If once is not enough the harrows may go another bout in a place as before, and so on till it is sufficiently harrowed—
—I have seen men perform cagling, or in other

wards, harrowing a rough fallow in a very unskillful manner; for instance:—If the field is hilly, they will sometimes commence up the field and down, and sometimes across the bottom. If they commence across the bottom of the field, the horses will have to walk on the rough ground, or the harrows will not go on any fresh ground; and it is with the utmost difficulty that horses can be kept on the rough ground; nor will the harrows do so much work, if they commenced at the top of the field: the weight of the harrows will be more on the rough clods, and the horses may go on the smooth ground, as the harrows will hang down the field. If one corner of the field is the highest, the commencement should be made there, and work round the hill, in order that the horses may go level and on smooth ground; in that case three horses will do as much work as five, either up and down the field, or across the bottom.

SECTION XXII.

ON THE AGE OF HORSES.

IT is necessary that every owner of horses should be well acquainted with their age. It is very generally believed that no one can tell the age of a horse after he has arrived at the age of seven years: indeed, the marks and symptoms whereby a horse's age, after he has attained to seven years, may be ascertained, seem to be kept as a secret among horse-dealers: but I have known horses to have a perfect mark in their upper corner teeth at the age of fourteen. Again, it is very possible for any person to be mistaken a year at almost any age, unless he knew whether the horse was an early or a late foal; for sometimes the mouth of an early foal of three years old will very much resemble that of a late foal of four years old, and so on. Furthermore, an experienced person might be mistaken in the age of a colt of two years old, when he has been worked, and is well filled up, for their corner teeth at that age very much resemble those of five years old, only they are smaller and smoother. The regular time of casting their

eth is, when they are rising three years old; then they cast the four middle front teeth, two on the upper and two on the lower jaw. At four years old, they cast the four next to them; and at five the four corner teeth. It may be observed, that the teeth are hollow at the top, which is called the mark, and they generally carry the mark in their lower corner teeth till they are rising eight years old: after that age their lower teeth become level and even, and, consequently, after that age, reference must be made to the upper teeth, and there will be found a perfect mark in all the front teeth, and those begin filling up in rotation as the others, so when they arrive at the age of thirteen years, their mouth is mostly completely filled up. Moreover when they arrive at the age of fifteen or sixteen years, their front teeth become very large; after that age, they begin to wear down a little; and when they arrive at the age of eighteen or twenty years, their teeth are generally worn completely down to the gums; so that with strict observation, any experienced person may never be much mistaken in the age of horses at any time.

SECTION XXIII.

ON FOALING, &c.

WHEN mares have been regularly worked there is seldom any danger at the time of foaling, providing they have a place, or a convenient field, to run loose in; but still it is right to keep a watchful eye over them, when they draw near to the time of foaling, which is mostly known by them waxing at the end of their paps. If they are regularly worked, and in moderate condition, (which is always the safest,) they generally wax a day or two before they foal.

If a mare is in a proper condition, and a convenient place where she can run loose in nature will mostly perform its own work the best and safest. All that is required, is to prevent the young foal from being smothered in the sheet, litter, or any other cause; but even this should be done as secretly as possible. Therefore, if it is seen that there is no danger it is better to keep out of the place from her for much attendance mostly does harm, and the less you meddle with the mare, or foal, the

etter, with the exception of giving proper nourishment to the mare. A mash of scalded bran and oats, about new milk warm, is a proper diet to give her in half an hour after she has foaled; and a little warm water, with a small quantity of good hay at a time.

If it is seen that the foal is weak and cannot stand, or nearly so, in the course of an hour, it may be supported a little time, and then lie down; when it struggles, it may be supported as before. But the person that supports the foal should be very careful that it does not fall on him; as in that case, it will not take well to the mare. The best way for a person to steady a foal is, to keep behind it; but he should not, by any means, attempt to push the foal forward, as that would cause it to fall the more backward.

It sometimes happens that the mare is so nervous and ticklish that she cannot bear the foal to suck. When that is the case, it is proper to put a bridle on her, and the person that is almost capable of mastering her should take hold of the paps and draw them pretty well; and then she will generally allow the foal to suck. If it is found necessary, a twitch may

be put on her nose and ear, which will mostly be sufficient in the worst of cases.

If mares go on well, they may be worked rather easy in about a week after they have foaled. There is an inconvenience in working mares on the road soon after they have foaled as they mostly work too hard towards home therefore if they can be spared coming home which is sometimes the case with agricultural horses, it is proper to take them out of the team and let them walk behind the carriage, if it is empty; they will generally do all the work and so overheat themselves as to endanger both the lives of mares and foals.

If a mare works regularly when she is suckling, the foal should be taught to drink. Curd are proper nourishment for it, and the best time to give them, is, towards the first, when it is about a fortnight old. If this cannot be done without holding, a strong man may hold it and then a person with some sweetened curd or milk, should endeavour to teach it to drink. The best way for a person to hold it, is, to put one hand under and round the neck, and the other over the back to the flank; and having his own back against a wall, he will be able to

old the foal without the least danger; and putting his own knees underneath the foal's belly, will be able to take it nearly off the ground, and prevent it from straining itself.

When mares work regularly it is highly necessary that the foals should be weaned as early as possible, as it will be much better both for the mares and foals. A little goose oil is a proper thing to rub a mare's teats with, in order to turn the milk. It is a safe plan to keep the foal up for a few days or a week, or it will be difficult to keep it in the pasture, which should be of a considerable length: after grass, or clover, is proper.

It should be observed that when severe weather approaches, the foals should have a dry bed to lie down on, if it is possible: this should be well attended to at every age; for it will cause them to grow into a more handsome, and much better form, although some argue that they grow better out of doors. When they are starved out of doors, they may appear bigger, when in reality it is not the case. A little hay and corn is proper for them in the wet and severe weather, and it will be a means, in a great degree, of checking the griping quality of the cold and

damp grass, and cause them to grow much better. This is the proper time to make a good or bad horse; for if they are not encouraged when young, and taken to regular work at two years old, which is frequently the case; I say, if they are not encouraged till they arrive at that age, they cannot grow into good and strong horses.

If at the time of foaling it is seen that the foal does not present itself in a proper position, it would be advisable to call in an experienced person. The first thing that ought to be done, should be to put the mare into a proper form: the most advantageous position is to drop the shoulder into a hole or low place, and then draw the hind legs gently forward; and in most cases a long-armed man will be able to bring the foal forward in a proper manner. If, however, he cannot reach the foal, or accomplish the desired object, which may be the case if the head is turned back, then it would be right to get a strong wire, well polished, and bent in a proper form, so as it would conveniently hook into the mouth, socket of the eye, nostrils, or any other part of the foal's head, where the hook could be introduced with the most advan-

ge; by so doing the head and neck may be brought straight; then the fore legs must be brought forward. In this case, if the hinder part presents itself, it will be better to bring the hind legs first than to attempt to turn the foal; as the mare will foal as easy that way as any other, or nearly so.

It sometimes happens that it is necessary to cut a part of the foal off; but this should be done by a man of great skill and experience; nevertheless, every exertion should be made previous to cutting. If the head should be out without the legs, and it is seen that the foal cannot be brought away safely, the head should be cut off, and when the throws are off, the foal should be pushed gently back, so as to enable the operator to bring the fore legs forward. As soon as the foal is put into a proper position for extraction, the mare should be turned on level ground, or rather the fore part on rising ground: this position will greatly assist nature in extracting the foal. Indeed nature may be assisted with moderation, if seen necessary. I have known a man, with a long arm, to bring a foal head foremost, when turned back in the womb, by means of a small leaden ball fastened

at the end of a piece of cord ; but when this is attempted, the foal must lay in a favourable position ; as it is effected by dropping the ball down the inside of the neck, and then getting hold of both ends of the cord, and pulling the head forward in the best and most convenient manner possible. If the desired effect can be accomplished in this manner, it would be the best to do so ; as it is safer and much more preferable than the wire instrument. Placing the mare in a proper position will greatly assist the operator in extracting the foal. When the head is brought straight, it probably will be necessary to fasten a cord to the upper or lower jaw, in order to keep the head straight, and assist in bringing it forward ; but this should be done with the greatest care, and the cord should rest on the arm of the operator to keep it from pressing on any part of the uterus. A cord may also be fastened to a foot, but the same precaution should be taken not to wound any part with the cord, as has been previously mentioned.

FINIS.

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The following paragraph having been omitted
its proper place, by the author, it has been
deemed necessary to insert it here:—

It must be observed, that if a horse cuts, he
must be shod thicker on the inside of the foot
which he cuts with; and pare the outside of
the foot a little more down; for when it is
thickest on the inside, when he lifts up the
foot it causes it to jerk out, and prevent his
trotting.





